# FUTURE

Continued from B-1 28 Dec 1986

But surpluses may not exist during drier years. In addition, most of the water considered surplus on the river does have claims on it at Utah Lake, so the BOR plans to send Strawberry Reservoir water to Utah Lake to make up for withheld Provo River water.

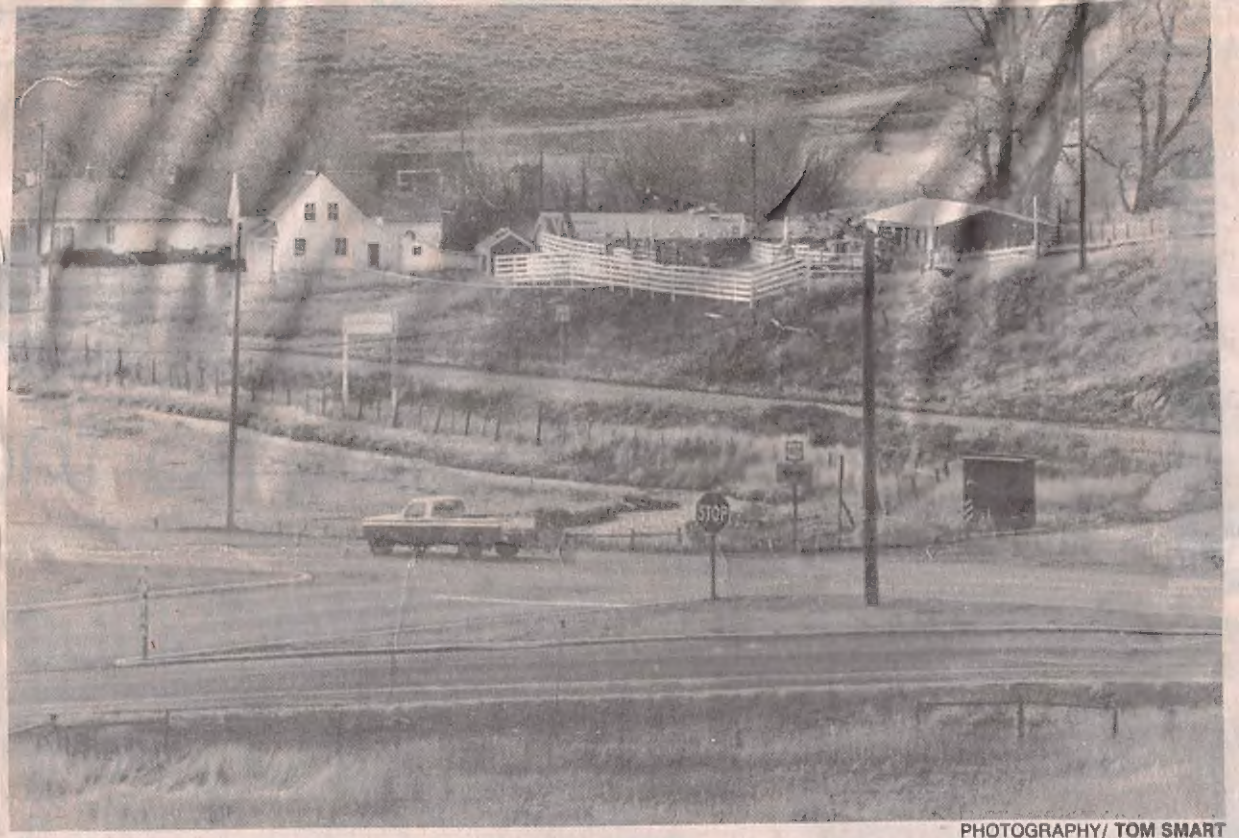
Jordanelle would have an impact on many other lakes in the region once construction is under way. The bureau plans to stabilize 15 upper-mountain reservoirs in the Uinta Mountains near the headwaters to the Provo River. The largest are Trial, Wall and Washington lakes.

The stabilization would reduce the overall water level in the Provo River between the headwaters at Trial Lake and Jordanelle Reservoir and could impact 38 miles of stream fishery. The increased access to fishing at the reservoir is meant to compensate for the stream fishery losses, which is of little consolation to the members of fly fishing organizations or the Environmental Protection Agency.

The EPA does not agree the bureau can adequately replace 135 acres of existing wetlands with Jordanelle shoreline.

State officials estimate the reservoir would receive 90,700 man-days of fishing annually compared with about 1,321 man-days of fishing under current stream conditions.

Almost all of the water in the reservoir would be active storage, meaning the lake could be almost completely emptied during an extended drought. During an average year, the water level would drop 31 feet.




PHOTOGRAPHY/ TOM SMART

**Farm homes and outbuildings in Jordanelle at Hailstone Junction will make way for the dam.**

Higher density camping facilities, a 10-lane boat ramp, parking to accommodate 300 vehicles and day-use beaches and group recreation areas are planned for construction at what has been dubbed the Hailstone Recreation Area on the west side of the reservoir about one mile north of the dam. Hailstone would be the main recreation development and is being designed to conform with Utah State Parks and Recreation standards.

The state has not committed to assume responsibility for the recrea-

"If anaerobic conditions were to develop within this arm of the reservoir, the water might become acidic," the environmental statement reads. "The fall turnover would then mix these metals throughout the water column producing aesthetic problems, and possibly some toxicity."

The report also says the water could kill macroinvertebrates that fish feed on, causing the fish to leave that segment of the reservoir.

Jerry Miller, BOR water quality

with a chair lift connecting the new resort to Deer Valley.

Attorney Craig Smay said the development at the resort area was to be under construction this year on a total of 4,300 acres of land, but construction is now expected to commence next spring. Some 3,500 condominium, townhouse and hotel units are planned for construction over the next 10 to 20 years, and ski lifts could b operating several years before the eservoir begins to fill.

Ownership and operations at the

conditions between 1930 and 1974 and have simulated what the current demand on the reservoir would be, assuming Utah sees similar weather cycles. The reservoir would have been drawn down to an elevation of 6,120 feet above sea level — 44 feet below the full level — during one five-year period. The severe drought in the late 1930s and early 1940s would have required the lake to be completely drained in 1942.

Because of the gradual slope in the reservoir basin at the extremities of both the northern and eastern arms, the shoreline would move significantly depending on weather conditions. During wet years, 228 acres would be exposed during the late summer when water is released through the dam. During an average year, that amount would almost double with 439 acres exposed; and 739 acres would be exposed in a single season during drought conditions.

If the reservoir is full at the beginning of the summer, the shoreline at the ends of the northern and eastern arms could move a half-mile during the drawdown period in an average year.

Because of that fluctuation, the plans for a recreation facility planned at the end of the eastern arm do not include a boat ramp, which could be 2,600 feet from the water during summer boating months. The campground would be oriented more around traditional camping, with camp sites scattered among the trees, said Fred Liljegren, BOR landscape architect.

"This will be more of your quiet get-away-from-everybody type camping." A mile-long segment of the Provo River upstream from the high-water line on the reservoir would be available for fishing, canoeing and kayaking.

tion area, and construction of it won't begin until that commitment is made.

An area for a marina and boat slips has been designated near the main recreation development, but it would have to be built by a concessionaire, not the bureau. Several areas on the east side of the northern arm may prove to be good windsurfing spots, but they will be evaluated after the reservoir fills, Liljegren said.

Another state agency, the Utah Division of Wildlife Resources, is making plans now to stock the reservoir for fishing. "We do have Jordanelle on our projected fish needs," said fisheries manager Glenn Davis. "That will be one of the priorities in the state because of its location."

Stocking Jordanelle would put a considerable strain on the state's aging hatchery system, he said. "The system we've got is deteriorated badly. Our hatcheries are in pretty poor condition, the majority of them."

Davis said Jordanelle is expected to have good fishing, at least initially. "New waters provide the best fishing."

That condition could change, though, unless the bureau can overcome a heavy metals and oxygen problem described in its 1979 Final Environmental Statement.

Most of Jordanelle's water would enter through the eastern arm. Only 5 percent would enter through the northern arm, which means the water in the northern part of the reservoir would have less turnover and could become stagnant. The northern arm also has heavy metals contamination potential because of mine drain inflows, the presence of mine waste piles in the basin and natural soil mineralization.

branch chief, said Jordanelle is considered to be a "sacrifice reservoir" because it would capture mineral contaminants that would otherwise flow directly to Deer Creek Reservoir. The bureau, which also built the dam at Deer Creek, has a plan to reduce by half the 27.6 tons of phosphorus that enters Deer Creek each year. Jordanelle plays a significant part in that phosphorus reduction plan, Miller said.

Because of likelihood of phosphorus and heavy metal contamination in Jordanelle, an artificial method for mixing the water in the north arm and maintaining adequate oxygen levels would be a perpetual lake management task.

A pumping station that would inject air at the reservoir bottom would probably be located somewhere on the northern arm, said Miller.

BOR officials are trying to get the Olson-Neihard mine tailings pond, less than a mile northwest of Hailstone Junction, included in the federal Superfund project to have the tailings moved to a higher elevation out of the reservoir basin. BOR Project Manager Kirt Carpenter said the tailings could be stabilized where they are, but the BOR can see a problem doing that if the inundated tailings later become suspect in a water quality problem.

The Mayflower Mountain tailings ponds, which would not be inundated, were within the reservoir management boundary surrounding the reservoir. That parcel of land was removed from the management area surrounding the reservoir basin recently.

The cleanup there is now the responsibility of Dutch developers who own the land and plan to build a resort community and ski area on the Wasatch slopes west of the reservoir,

and Deer Valley would be separate, though one or more interconnecting lifts would allow skiers to use both sides of the mountain, Smay said.

While skiers would be traversing the top of both sides of the mountain, mining interests fear water from the reservoir would be crossing under the mountain, spelling doom to future mining activity in the Park City mining district.

Just as mining residue would have an adverse impact on water entering the reservoir, hydrostatic pressure may force water out of the reservoir through underground fissures in rock formations that would substantially increase the amount of water entering mine shafts in the Park City mining district.

Most of the underground mines in the Park City area, located several miles west of the reservoir site, are 500 to 700 feet lower than the reservoir.

McKay Edwards, president of Park City Consolidated Mines Co., said water from Jordanelle would flood the Park City mines. The mining district is inactive, partly because water in the mines is already a problem. Potential investors that consider reactivating the mines lose interest when they find out about Jordanelle, he said.

BOR officials say Jordanelle would have a minimal impact on the water problem in the Park City mining district.

All of the water that leaves Jordanelle the way it is supposed to — through the outlet works at the dam — would be delivered for use through Deer Creek Reservoir. Several existing aqueducts would be used to convey the water to Salt Lake County and northern Utah County, and several other aqueducts are under construction.